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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/878,633	06/11/2001	Brian Worby	18504/338	3281

7590

03/18/2005

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EXAMINER

PERUNGAVOOR, VENKATANARAY

ART UNIT	PAPER NUMBER
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2132

DATE MAILED: 03/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/878,633

Applicant(s)

WORBY, BRIAN

Examiner

Venkatanarayanan Perungavoor

Art Unit

2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/20/2002
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

This action is in response to application filed on 6/11/2001.

Specifications

On page 11 Line 24, The "an" should be "An" as it indicates the start of sentence.

Claim Rejections – 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1,3,6,7,13,15-20 rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,209,099B1 to Saunders.

3. Regarding Claim 1, The "an interface for receiving the commands and information[**Abstract & Column 2 Line 24-32 & Figure 2 item 22**]; a cryptographic processor for performing data encryption and decryption, wherein the data encryption includes a two-way encryption process which produces encrypted data when applied to the data and a one-way process which produces at least one initial check value when applied to the data, and wherein the decryption utilizes the two-way encryption process to produce data and the one-way decryption process to produce at least one decrypted data check value, wherein the decrypted data will not be transferred unless the at least one initial check value and the at least one decrypted data check value match[**Abstract**

& Column 3 Line 6-54]; and a storage system, including a storage medium, for the storage and retrieval of the encrypted data and at least one initial check value**[Column 2 Line 24-32]**” is substantially taught by Saunders et al.

4. Regarding Claim 3, The “storage or retrieval commands include a cryptographic key” **[Column 1 Line 50-63]**.

5. Regarding Claim 6, Saunders teaches of producing initial check value **[Column 1 Line 35-49]**, and also teaches of using an decryption check value by applying a hash algorithm which utilizes the cryptographic key **[Column 3 Line 58-62]**.

6. Regarding Claim 12, The “encryption chip and the decryption chips are each an ASIC” **[Column 2 Line 12-23]**

7. Regarding Claim 13, The “storage system stores both the encrypted data and initial check value on the storage medium” is met by Saunders **[Column 2 Line 24-40]**.

8. Regarding Claim 15, The “receiving data to be stored and an encryption key from the host computer**[Abstract & Column 2 Line 24-32 & Figure 2 item 22]**; encrypting the data using a two way encryption process and the encryption key **[Column 3 Line 58-62]**; generating an initial decryption check value using a one way encryption process and the encryption key **[Abstract & Column 3 Line 6-54]**; storing

the encrypted data and the initial decryption checks thus providing the capability to prevent the retrieval of information unless the initial decryption check value matches a later generated decryption check value[**Abstract**]” is substantially taught by Saunders.

9. Regarding Claim 16, The “later generated decryption check value is generated by decrypting the encrypted data using the two way encryption process and a decryption key to produce decrypted data, and applying the decrypted data and the decryption key to the one way encryption process, thus producing the later generated decryption check value” is met by Saunders. see **Column 3 Line 40-54**.

10. Regarding Claim 17, The “decryption key is provided as part of a request for retrieval” is met by Saunders see **Column 3 Line 40-54**.

11. Regarding Claim 18, The “retrieving the encrypted data and the initial decryption check value[**Abstract & Column 2 Line 24-32 & Figure 2 item 22**]; decrypting the encrypted data using a two way encryption process which was also used to encrypt the data and a decryption key supplied as part of the retrieval request[**Abstract**]; generating a second decryption check value by applying the decrypted data and the decryption key to a one way encryption process[**Column 1 Line 35-49**]; and providing the decrypted data if the initial decryption check value and the second decryption check value are equal [**Column 1 Line 35-49**]” is substantially taught by Saunders.

12. Claim 19 is rejected under the same rationale as Claim 19

13. Regarding Claim 20, The "receiving data to be stored and an encryption key[**Abstract & Column 2 Line 24-32 & Figure 2 item 22**]; encrypting the data using a two way encryption process and the encryption key; generating an initial decryption check value using a one way encryption process and the encryption key;[**Column 3 Line 6-64**] storing the encrypted data and the initial decryption check, thus providing the capability to prevent the unauthorized retrieval of information unless the initial decryption check value matches a later generated second decryption check value; in response to a request for retrieval which includes a decryption key, retrieving the encrypted data and the initial decryption check value; decrypting the encrypted data using the two way encryption and the decryption key provided in the request for retrieval; generating the second decryption check value by applying the decrypted data and the decryption key to the one way encryption process; and providing the decrypted data if the initial decryption check value and the second decryption check value are equal[**Abstract & Column 3 Line 40-54**] is substantially taught by Saunders.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 2,5 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,209,099B1 to Saunders as applied to claim 1 above, in view of U.S. Patent Publication 2001/0056350 A1 to Calderone et al.

16. Regarding Claim 2, The "two-way encryption process is a Rijndael algorithm" is not disclosed by Saunders. However, Calderone et al. discloses the use of AES(Rijndael) algorithm see Paragraph 0052. It would be obvious to one having ordinary skill in the art at the time of the invention to include AES algorithm so that it would not be computationally expensive see NPL¹ see Line 1.

17. Regarding Claim 5, The "cryptographic processor can be disabled" is commonly known in the art, official notice taken.

18. Claim 8-12 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,209,099B1 to Saunders in view of U.S. Patent No. 6,061,449 to Calderone et al.

19. Regarding Claim 4, Saunders does not disclose the use of initial and decryption check value being 4 bytes long. However, Calderone et al. disclose the use of 8 bytes for authentication information see Column 6 Line 24-43 . It would be obvious to one having ordinary skill in the art at the time of the invention to modify authentication

¹ http://www.suse.de/~garloff/Writings/mutt_gpg/node3.html

information for check value and reduce the length in the invention of Saunders in order to decrease the overhead see Column 6 Line 51-56 as taught in Calderone et al.

20. Regarding Claim 8, Saunders does not disclose the use of SCSI interface. However, Calderone et al. discloses SCSI interface see Column 1 Line 50-65. It would be obvious to one of ordinary skill in the art at the time of the invention to include SCSI interface of Calderone et al invention to Saunders in order to make easier for mass storage see Column 1 Line 57-60.

21. Regarding Claim 9, Saunders does not disclose the use of communication bus . However, Calderone et al. discloses the use of a communication bus see Column 11 Line 62-65. I would be obvious to one with ordinary skill in the art at the time of the invention to include a communication bus of Calderone et al. to Saunders in order for there to be more effective communication between devices see Column 11 Line 65-Column 12 Line 2.

22. Regarding Claim 10, Saunders does not disclose an encryption chip and a decryption chip. However, Calderone et al. discloses an encryption chip see Column 17 Line 61-66 and a decryption chip see Column 18 Line 1-10. It would be obvious to one having ordinary skill in the art at the time of the invention to include an encryption and decryption chip in the invention of Saunders in order to increase modularity see Column 18 Line 11-13 as taught in Calderone et al.

23. Regarding Claim 11 and 12, Saunders does not disclose the use of chip being programmable logic devices. However, Calderone et al. discloses the use of programmable logic devices(Column 18 Line 46-51). It would be obvious to one having ordinary skill in the art at the time of the invention to include programmable logic devices and ASIC in the invention of Saunders in order to greater flexibility see Column 18 Line 45-46 as taught in Calderone et al.

24. Claim 14 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,209,099B1 to Saunders in view of U.S. Patent No. 6,069,952 to Saito et al.

25. Regarding Claim 7, Saunders does not disclose the use of optical disc drives. However, Saito et al. discloses the use of optical disc drive that is a removable storage medium[Column 4 Line 36-45]. It would be obvious to one having ordinary skill in the art at the time of the invention to include Saito et al's optical disc drive in the invention of Saunders in order to increase the portability.

Conclusion

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 5752163 to Robinson

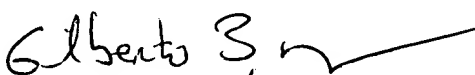
27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Venkatanarayanan Perungavoor whose telephone number is 571-272-7213. The examiner can normally be reached on 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Venkatanarayanan Perungavoor
Examiner
Art Unit 2132

VP
3/04/05


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